Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Unlicensed Operation in the Band 3650-3700 MHz	)	**ET Docket No. 04-151**
Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band	)	**ET Docket No. 02-380**
Amendment to the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band	)	**ET Docket No. 98-237**

COMMENTS OF THE
INDUSTRIAL TELECOMMUNICATIONS ASSOCIATION, INC.

The Industrial Telecommunications Association, Inc. ("ITA") hereby respectfully submits its comments in response to the Commission's *Notice of Proposed Rule Making* ("NPRM") in the above-referenced matter.[1] The NPRM seeks comment on maximizing the efficient use of the 3650-3700 MHz band ("3650 MHz band"), while introducing new and advanced services.[2] As discussed below, ITA urges the Commission to retain all, or a potion of, the 3650 MHz band for licensed operations.

By way of background, ITA is the national advocacy and service organization for private licensees and radio dealer providers, representing the private wireless industry's communication interests before the FCC and Congress. As an FCC-certified frequency advisory committee, ITA

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1 *See* Unlicensed Operation in the Band 3650-3700 MHz, Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band, Amendment to the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band, *Notice of Proposed Rule Making*, ET Docket Nos. 04-151, 02-380, and 98-237 (rel. April 23, 2004) ("NPRM").

2 NPRM at ¶ 1.

coordinates in excess of 6,000 applications each year on behalf of both enterprise and radio dealer applicants who require authority to operate voice and data communication systems on wireless spectrum between 30 MHz and 1.4 GHz.

ITA enjoys the support of a membership including more than 2,100 licensed two-way land mobile radio communications users, private mobile radio service ("PMRS") oriented radio dealer organizations, and the following trade associations: Alliance of Motion Picture and Television Producers, Aeronautical Radio, Inc., and the National Propane Gas Association. In addition, ITA is affiliated with the following independent market councils: the Council of Independent Communications Suppliers, the Taxicab & Livery Communications Council, the Telephone Maintenance Frequency Advisory Committee, and USMSS, Inc.

ITA's extensive involvement with the private land mobile industry includes application preparation for public safety and first responders; coordination and engineering services for industrial/business users, paging licensees, special emergency eligibles, commercial licensees under Part 90 of the Commission's rules, and PMRS radio dealers; protection of petroleum service users through a contractual agreement with the American Petroleum Institute; the Commission's first line of post-licensing, interference resolution; and various other services.

With these comments, ITA wishes to make the following points:

- There are major classes of wireless users who, justifiably, cannot rely on devices or services utilizing unlicensed spectrum for the protection of their communications investments and for the safety of life and property.

- Licensed spectrum use in the 3650 MHz band will allow mission critical entities to provide broadband services similar or identical to those envisioned for unlicensed use, but with a more certain operating environment, yielding credibility for further investments in fixed broadband communications systems.

- A licensed spectrum allocation in the 3650 MHz band would allow higher power limitations, effectively serving larger geographic areas than unlicensed devices or services.

- The 3.6 GHz band's relatively limited bandwidth and pre-existing incumbency issues make it attractive for licensed broadband operations.

As unlicensed technologies develop in an unregulated environment, many users have observed the quick saturation of devices operating on unlicensed bands. The rapid deployment of unlicensed technologies, however, creates an unstable operating environment in some geographies in which certain wireless users are reluctant to utilize the spectrum for mission critical operations for fear of future system degradation due to unpredictable increases in the noise floor.[3]

The opportunities that have unfolded as a result of the development of unlicensed technologies, nevertheless, demonstrate the need for *licensed* spectrum for similar broadband services.[4] With licensed broadband spectrum, these entities could realize new communications efficiencies that save lives and property without the threat of interference and the uncertainty characteristics associated with an unlicensed operating environment.[5]

In the Commission's *Memorandum Opinion and Order and Third Report and Order* concerning the transfer of the 4.9 GHz band from Federal Government use, the Commission noted that "public safety associations persuasively argued that a public safety designation … would enable responders to carry out critical and urgent missions more effectively, and would

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[3] Mission critical radio systems are primarily used for safety-of-life and the prevention of property damage – whether in a warehouse, dockside, or in a law enforcement vehicle – and demand reliable, secure, real-time access to spectrum. These systems support every American business and industry sector (such as transportation, pipelines and construction operations, as well as public safety users and many others) by providing safety to employees and the public at-large.

[4] By advocating licensed services, ITA urges the Commission to support prudent management of the spectrum through the most efficient and intensive use of that spectrum as can be effective for its intended recipients and objectives.

[5] As an ancillary characteristic, a licensed broadband allocation could create new internal operating efficiencies for wireless users, thus stimulating the American economy.

provide a safer environment."[6] ITA submits that the 3650 MHz band could provide the same safe environment for broadband communications of mission-critical, wireless entities.

In essence, licensed spectrum in the 3650 MHz band could provide dependable spectrum for the provision of Wi-Fi and WiMAX-like services that complement traditional networks employed for the protection of life and property. For example, a system manufactured by Motorola, Canopy, permits private land mobile licenses to link remote video monitoring capabilities with legacy radio equipment, and connect to the Internet for virtually instantaneous access to information in critical situations, such as criminal record information in a law enforcement vehicle or utility pipe location information for construction crews.

Despite the obvious benefits of the Canopy system for many entities, a justified hesitation exists within the industry because of its reliance on unlicensed spectrum. Were this system and others in development to operate in a more certain, reliable spectral and geographic environment, entities may better justify the expense associated with such a communications investment and employ more effective and efficient communications services for internal uses.

One of the Commission's stated objectives in this proceeding is to provide another tool that will extend broadband services into rural areas more effectively. As unlicensed systems are stretched to cover more distance, situations frequently arise where a user's receiver becomes located in close proximity to a neighboring transmitter. In these situations, the weaker user-to-user isolation tools, such as spread spectrum coding gain, antenna directivity, or cross polarization, may not mitigate the reception of undesired signals. A licensed approach, on the other hand, supports a system's operational integrity and efficient use of the spectrum from a

[6] *See* The 4.9 GHz Band Transferred from Federal Government Use, *Memorandum Opinion and Order and Third Report and Order*, WT Docket NO. 00-32 (rel. May 2, 2003) at ¶ 7.

technical perspective, as prudent spectrum management of the frequency environment could isolate neighboring systems.

Moreover, ITA urges the Commission to remain aware that there is a substantial amount of unlicensed spectrum available today. As the Commission noted in its *Notice of Inquiry* on the acceptance of unlicensed devices in the 3650 MHz band, it has already made 664.5 MHz of unlicensed spectrum available to the public in the 900 MHz (902-928 MHz), 2.4 GHz (2400-2483.5 MHz) and 5 GHz bands (5.15-5.35 GHz, and 5.47-5.825 GHz bands).[7]

Given the broad bandwidths available in the 2.4 GHz and 5 GHz bands, the relatively limited bandwidth in the 3.6 GHz band would not likely replace existing Part 15 operations, nor would it be an attractive band for new unlicensed devices. ITA recommends, therefore, that the Commission make this spectrum available on a licensed basis for broadband operations in a more structured, certain spectral environment.[8] In such a case, unlicensed technology suppliers will not lose business opportunities, but instead provide products tailored to a new class of wireless users requiring a secure operating environment.

As explained above, ITA supports the retention of a licensed allocation in the 3.6 GHz band for next generation broadband services. Such an allocation would provide a reliable,

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[7] *See* Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band, *Notice of Inquiry*, ET Docket No. 02-380 (rel. Dec. 20, 2002) at ¶ 19. In addition, the Commission is also considering the deployment of unlicensed devices on UHF television channels. *See* Unlicensed Operation in the TV Broadcast Bands, and Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band, *Notice of Proposed Rule Making*, ET Docket Nos. 04-186, 02-380 (rel. May 25, 2004).

[8] It should be noted that Motorola, in its comments on the Spectrum Policy Task Force Report, outlined the need and benefits of licensed broadband services, especially on spectrum below 6 GHz. *See* Comments of Motorola, Inc., filed in ET Docket No. 02-135 on January 27, 2003, at p. 20.

certain spectrum environment for timely operations in support of mission critical tasks, yielding credibility for much needed investments in broadband services.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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